CURRICULUM VITAE

Eric Bonnetier

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EDUCATION

Ecole normale supérieure, Paris, 1983-1988
Ph.D. University of Maryland, 1988.
Habilitation à diriger les recherches, January 2001.

PROFESSIONNAL EXPERIENCE

Aug. 1988 - Aug. 1989 : Commissariat à l'Energie Atomique
(military service).

Sept. 89 - Aug. 2002 : Chargé de recherche CNRS, Centre de Mathématiques
Appliquées, Ecole Polytechnique, Palaiseau, France

Sept. 1995- Dec. 1996 : Visitor, Rutgers University Math Dept.

Since Sept. 2001 : Professor, Université Grenoble-Alpes.

Aug. 2010- Dec. 2010 : Research member, MSRI, Berkeley.

Nov. 2016 : Visiting Professor, EPFL, Lausanne.

Dec. 2016 : Visiting Professor, Dept. of Mathematics, HKUST, Hong Kong.

Jan. 2017 - May 2017 : Visiting Professor, IMA, University of Minnesota.

RESEARCH INTERESTS

Composite materials: homogenization and regularity theory.
Shape optimization and inverse problems.
Mean curvature flow and crystal growth.

CURRENT RESEARCH PROJECTS

Pointwise bounds on the gradients of solutions to elliptic PDE's in composite
media.
Spectral properties of the Neumann-Poincaré operator and applications to
metamaterials.
Asymptotic study of the diffractive properties of rough metallic surfaces.
Phase-field models for anisotropic motion by mean-curvature.

CURRENT COLLABORATIONS:

M. Vogelius (Rutgers), F. Santosa (U. of Minnesota), Hai Zhang (Hong Kong), Haigang Li (Beijing Normal University), J. Ortega (Universidad de Chile), H. Ammari (ETH Zurich), H. Kang (Inha University), C. Dapogny, and F. Triki (LJK Grenoble).

SERVICE TO THE COMMUNITY :

Member of the Commission Scientifique Sectorielle 5 of the Institut de Recherche et Développement[1] (2016-20).

Coordinator for Mathematics of the Ecos Nord program[2] of scientific cooperation with Latin American countries (2012-20).

Chairman of the Laboratoire Jean Kuntzmann, Jan. 2011– June 2016, (280 people, 105 faculty members, 90 PhD students).

Coordinator of the Master program in Applied Mathematics, Université Joseph Fourier, 2004-2010.

Member of the hiring committees of the universities of Clermont-Ferrand, Nice, Rennes, Toulouse, Saint Etienne, Lyon.

Program committees:

Organizing committee of SMAI 2007, (the bi-annual meeting of the French Applied and Industrial Maths Society).
Scientific committee, Congrès National d'Analyse Numérique 2008 (Canum).
Scientific committee of WIPA 2010 Workshop on Inverse Problems and Application, Valparaiso, Chile, Jan. 18-22, 2010 (and CIMPA summer School in Santiago).
Organizing committee of Applied Analysis for the Material Sciences, CIRM Luminy, 2013.
Organizing committee of PICOF 2016, Autrans, 2016.
Organizing committee of the 1st France–Mexico meeting on Data Analysis, UNAM, Mexico City, Nov. 3th-4th 2016.
Organizing committee of the workshop on Emerging topics in optics, IMA special year on Mathematics and Optics, April 24th-28th 2017, Minnesota.
Organizing committee of the France-Mexico Summer School on Data Analysis, UNAM, Mexico City, Dec. 13th-15th 2017.
Scientific and organizing committees of AIP 2019 (Applied Inverse Problems).

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[1]`https://www.ird.fr/ird.fr/l-ird/l-organigramme/`
`instances-et-comites/les-commissions-scientifiques-sectorielles/`
`css5-sciences-des-donnees-et-des-modeles`
[2]`http://www.univ-paris13.fr/cofecub-ecos/ecos-nord`

PROJECTS AND CONTRACTS:

- Société Nationale des Poudres et Explosifs (SNPE # 2092, 1993-1994)

- PI of the cooperation project DGRST (Tunisie)-CNRS (projet 98/R1501), 1998–2001.

- PI (with M. Vogelius) of the CNRS/NSF project "Défauts, interfaces et couches limites dans les milieux composites" (projet 10669), 2001–2003.

- PI (with B. Bidegaray, LJK) of the project 'Physique des Interactions Fines' (http://www-lmc.imag.fr/lmc-edp/Brigitte.Bidegaray/PIF/index.html) 2002–2004.

- PI of the project 'Elasticité et Nanostructures', sponsored by the Région Rhône-Alpes, 2003-2005.

- Coordinator for LJK of Echoscan, a project sponsored by the French ANR (Agence Nationale de la Recherche) 2006-2009.

- Member of the ANR project Optiform, 2012-2014.

- Member of the ANR project Multi-ondes, 2017-2019.

- PI project HOMONIM, AGIR-University Grenoble-Alpes 'Homogenization and Negative Index Materials', 2015-16.

- PI (with J. Ortega, Univ. de Chile) of the Ecos-Sud project 'Inverse source detection in fractured media', 2019-2021.

AWARDS:

Cray prize on scientific computing 1997, (with G. Allaire, S. Aubry and F. Jouve).

University of Minnesota Ordway Distinguished Lecturer 2019-2020 (postponed due to the sanitary situation)

INVITED COURSES:

Complejidad en diseño óptimo: microestructuras y microgeometrías, Universidad de Castilla-La Mancha, Ciudad Real, april 2008.

Homogénéisation des milieux composites en phases diluées et applications, Calais, Sept. 2009.

Detection of defects in composite media, International workshop Control and Inverse Problems, IISc IMI, Bangalore, Dec. 2009.

Asymptotic methods for the detection of small inhomogeneities from boundary measurements, CIMPA Summer School on Inverse Problems and its Applications, Santiago, Jan. 2010.

Problèmes inverses hybrides, Tunis, March 2012.

Summer program on PDE's and Applied Mathematics, VIASM. Hanoi, July 14th-Aug. 7th 2014.

Integral equations for the modeling of plasmonic resonance of nanoparticles, Radon Workshop: Quantitative Tomographic Imaging - Radon meets Bell and Maxwell, RICAM, Linz, July 10th-14th, 2017.

Spectral properties of the Neumann-Poincaré operator, Beijing Normal University, Beijing, Aug. 8th-23rd, 2017

Spectral properties of the Neumann-Poincaré operator, Inha University, Seoul, Jan 29th–Feb 2nd and May 29th–June 6th 2018.

PUBLICATIONS IN REFEREED JOURNALS

1. E. Bonnetier. *Plane stress elasto-plastic constitutive equations obtained by homogenizing one-dimensional structures.* RAIRO M2an, Vol. 29,**1**, 23-52, 1995.

2. E. Bonnetier et C. Conca. *Relaxation d'un problème d'optimisation de plaques.* C.R. Acad. Sci. Paris, **t 317**, Série I, pp. 931-936, 1993.

3. E. Bonnetier et C. Conca. *Approximation of Young measures by functions and application to a problem of optimal design for plates with variable thickness.* Proc. Royal Soc. Edinburgh,**124 A**, 399-422, 1994.

4. G. Allaire, E. Bonnetier, G. Francfort et F. Jouve. *Shape optimization by the homogenization method.* Num. Math., Vol **76**, pp. 27–68, 1997.

5. F. Béreux, E. Bonnetier et P.G. Lefloch. *Gas dynamics equations, 2 special cases.* SIAM J. Math. An., **28**, 3, pp. 499-515, 1997.

6. E. Bonnetier, R.S. Falk et M. Grinfeld. *Analysis of a One-dimensional Variational Model of the Equilibrium Shape of a Deformable Crystal.* M2AN, 33 (3), pp. 573-591, 1999.

7. E. Bonnetier et C. Conca. *Optimality conditions for a relaxed layout optimization problem.* C.R. Acad. Sci., Série I Math. 327, 1005–1010, 1998.

8. G. Bao et E. Bonnetier, *Optimal Design of Periodic Diffractive Structures*, Appl. Math. Opt., **43**, pp. 103–116, 2001.

9. H. Ammari, N. Béreux et E. Bonnetier. *Analysis of the radiation properties of a planar antenna on a photonic crystal substrate.* Math. Methods Appl. Sci.,**24**, pp. 1021–1042, 2001.

10. E. Bonnetier et M. Vogelius, *An elliptic regularity result for a composite medium with "touching" fibers of circular cross-section*, SIAM J. Math. Analysis, **31**, pp. 651–677, 2000.

11. E. Bonnetier et A. Chambolle. *Computing the equilibrium shape of an elastic crystal.* SIAM J. Appl. Math., 62: 1093–1121, 2002.

12. F. Ben Hassen et E. Bonnetier *Asymptotic formulas for the voltage potential in a composite medium containing close or touching disks of small diameter.* SIAM MMS,4(1): 250-277, 2005.

13. E. Bonnetier et F. Khayat. *Influence of distorsion in the homogenization of fiber–reinforced composites*, M3AS **16**, # 11, 1861–1885, 2006.

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14. F. Ben Hassen et E. Bonnetier. *An asymptotic formula for the voltage potential in a perturbed ε–periodic composite medium containing misplaced inclusions of size ε*, Proc. Royal Soc. Edinburgh, 136 A, 669–700, 2006.

15. E. Bonnetier et S.G. Sista. *Asymptotics for the voltage potential in a periodic network with localized defects,* Math. Meth. Appl. Sci., 31 (10), 1175-1196, 2008.

16. H. Ammari, E. Bonnetier, Y. Capdeboscq, M. Tanter and M. Fink, *Impedance Tomography by Elastic Deformation*, SIAM J. Appl. Math., 68 (6), 1557-1573, 2008.

17. E. Bonnetier, C. Misbah, F. Renard, R. Toussaint and J.P. Gratier, *Does roughening of rock-fluid-rock interfaces emerge from a stress-induced instability?* Eur. Phys. J. B, 67 (1), 121-131, 2009.

18. E. Bonnetier, D. Bresch and V. Milisic, *A priori convergence estimates for a rough Poisson-Dirichlet problem with natural vertical boundary conditions*, to appear, Advances in Math. Fluid Mechanics, 2009.

19. H. Ammari, E. Bonnetier and Y. Capdeboscq, *Enhanced Resolution in Structured Media*, SIAM J. Appl. Math., 70 (5), 1428-1452, 2009.

20. E. Bonnetier and F. Triki, *Asymptotics in the presence of inclusions of small volume for a conduction equation: A case with a non-smooth reference potential*, AMS, Contemporary Math. 494, 95–111, 2009.

21. E. Bonnetier and F. Triki, *Asymptotic of the Green Function for the diffraction by a perfectly conducting plane containing a subwavelength rectangular cavity*, Math. Meth. Appl. Sci, 33 (6), 772-798, 2010.

22. J.F. Babadjian, E.Bonnetier and F. Triki, *Enhancement of electromagnetic fields caused by interacting subwavelength cavities*, SIAM Multiscale Modelling and Simulation, 8, no. 4, 1383-1418, 2010.

23. E. Bonnetier, E. Bretin and A. Chambolle, *Consistency result for a non monotone scheme for anisotropic mean curvature flow*, Interface Free Bound., 14 (1) 1–35. 2012.

24. E. Bonnetier and F. Triki, *Pointwise bounds on the gradient and the spectrum of the Neumann–Poincare operator: The case of 2 discs*, AMS, Contemporary Math.. 577.81–92. 2012.

25. E. Beretta, E. Bonnetier, E. Francini and A.L. Mazzucato, *Small volume asymptotics for anisotropic elastic inclusions*, Inverse Probl. Imaging, 6 (1) 1–23. 2012.

26. E. Bonnetier, D. Manceau and F. Triki, *Asymptotics of a dilute suspension of droplets with interfacial tension*, Quart. Appl. Math. 71, 89-117. 2013.

27. G. Bal, E. Bonnetier, F. Monard and F. Triki, *Inverse diffusion from knowledge of power densities*, Inverse Probl. Imaging. 7 (2) 353-375. 2013.

28. E. Bonnetier and F. Triki, *On the spectrum of the Poincaré variational problem for two close-to-touching inclusions in 2D*, Arch. Rat. Mech. Anal, 209 (2) 541–567. 2013.

29. E. Bonnetier, L. Jakabcin, S. Labbé, A. Replumaz. *Numerical simulation of a class of models that combine several mechanisms of dissipation: fracture, plasticity, viscous dissipation.* Journal of Computational Physics, 271. 397-414. 2014.

30. H. Ammari, E. Bonnetier, F. Triki, and M. Vogelius. *Elliptic estimates in composite media with smooth inclusions: an integral equation approach.* Annales Scientifiques de l'Ecole normale supérieure. 4e série, t. 48, 453-494, 2015.

31. E. Bonnetier, and Hoai-Minh Nguyen. *Superlensing using hyperbolic metamaterials.* Journal de l'Ecole Polytechnique. 4, pp. 973-1003, 2017.

32. E. Bonnetier, and Hai Zhang, *Characterization of the essential spectrum of the Neumann-Poincaré operator in 2D domains with corner via Weyl sequences.* Rev. Mat. Iber., Volume 35, Issue 3, pp. 925-948, 2019.

33. E. Bonnetier, F. Triki, and Chun-Hsiang Tsou. *Eigenvalues of the Neumann-Poincaré operator of 2 inclusions with contact of order m : a numerical study.* Journal of Computational Mathematics. 36, pp. 17-28, 2018.

34. E. Bonnetier, F. Triki, and Chun-Hsiang Tsou. *On the electro-sensing of weakly electric fish*, Journal of Mathematical Analysis and Applications, 464, pp. 280-303, 2018.

35. E. Bonnetier, C. Dapogny, F. Triki and Hai Zhang. *The plasmon resonances of a bowtie antenna.* Anal. Theory Appl., 35 2019, pp. 85-116. 2019.

36. E. Bonnetier, F. Triki and Qi Xue. *An inverse problem for an electroseismic model describing the coupling phenomenon of electromagnetic and seismic waves*, Inverse Problems 35-045002. 2019.

37. E. Bonnetier, C. Dapogny, and F. Triki. *Homogenization of the eigenvalues of the Neumann-Poincaré operator.* Archive for Rational Mechanics and Analysis volume 234, pp. 777-855. 2019.

SUBMITTED ARTICLES

1. E. Bonnetier, M. Choulli and F. Triki. *Stability for quantitative photoacoustic tomography revisited*, preprint (arXiv:1905.07914v2 [math.AP]). 2020.

2. E. Bonnetier, A. Niclas, G. Vial et L. Seppecher, *Multi-frequency method from one-side measurements for small defects reconstruction in waveguides*, preprint (hal-03130533, version 1). 2020.

3. E. Bonnetier, S. Gaete, A. Jofre, R. Lecaros, G. Montecinos, J. H. Ortega, J. Ramirez-Ganga, J. San Martin, *A shear-compression damage model for the simulation of underground mining by block caving*, preprint arXiv:2012.11118v2 [math.OC], 2020.

4. E. Bonnetier, C. Dapogny, and M.S. Vogelius, *Small perturbations in the type of boundary conditions for an elliptic operator*, preprint arXiv:2106.07407 [math.AP], 2021.

PUBLICATIONS IN PROCEEDINGS

1. E. Bonnetier et M. Vogelius *Relaxation of a compliance functional for a plate optimization problem.* Proceedings of the Conference on the Application of Multiple Scaling in Mechanics, P.G. Ciarlet and E. Sanchez Palencia eds, Masson, pp. 31-53, 1987.

2. E. Bonnetier, H. Jourdren et P. Veysseyre. *Un Modèle hyperélastique-plastique eulérien applicable aux grandes déformations : quelques résultats 1d.* Proceedings of the 6th national meeting DYMAT, CEG, Gramat, 1990.

3. G. Allaire, E. Bonnetier, G. Francfort et F. Jouve, *A topological approach to shape optimization.* ICIAM 95 special issue of ZAMM, Applied Stochastics and Optimization, O. Mahrenholtz et al. eds., Springer, pp. 255–258, 1996).

4. E. Bonnetier, R.S. Falk et M. Grinfeld. *A one-dimensional model to account for stress driven rearrangement in the equilibrium shape of a deformable crystal.* Proceedings of the Conference on Inverse problems, Control and Shape Optimization (PICOF'98), Carthage, Tunisia, 98.

5. E. Bonnetier, M. Brassel, A. Chambolle et F. Jouve, *A variationnal approach to stress–induced instabilities in heteroepitaxial growth*, XIth International Conference on Fracture, Turin, March 2005.

6. E. Bonnetier et F. Ben Hassen, *Asymptotics of the potential in a perturbed periodic composite medium containing misplaced inclusions*, Oberwolfach Report **49/2005**, 2776–2778, 2005.

7. E. Bonnetier and S.G. Sista, *Asymptotics for the potential in a periodic network with localized defects*, PAMM. Proc. Appl. Math. Mech. 7, 1050601-1050602 (2007) / DOI 10.1002/pamm.200700174

8. E. Bonnetier, and F. Triki, *A Note on Reconstructing the Conductivity in Impedance Tomography by Elastic Perturbation.* The Impact of Applications on Mathematics, Proceedings of the Forum of Mathematics for Industry 2013, M. Wakayama ed. DOI 10.1007/978-4-431-54907-9. 275-282, 2014.

PATENT

H. Ammari, E. Bonnetier, Y. Capdeboscq, M. Fink, M. Tanter, *Procédé et dispositif de la tomographie d'impédance électrique par perturbation élastique*, (N^o FR 0608538 dépot 28/09/2006 extension PCT/FR2007/052021).

INVITED TALKS and SEMINARS
- SIAM Annual Meeting, Chicago, July 1990.
- Université P. Sabatier, Toulouse, March 1991.
- Ecole Nationale des Ingénieurs de Tunis, April 1991.
- IMA Lisbon, May 1991.
- Universidad de Chili, Santiago, Jan. 1993.
- Université J. Fourier, Grenoble, April 1993.
- Ecole Nationale des Ingenieurs de Tunis, May 1993.

- Universidad de Chile, Santiago, June 1995.
- Rutgers University, Feb. 1996.
- University of Utah, Salt Lake City, May 1996.
- University of Maryland, Baltimore County, Oct. 1996.
- University of Maryland College Park, Nov. 1996.
- Picof'98 Carthage, Tunisia, April 1998.
- Conference on Functional Analysis, Partial Differential Equations and Applications in honor of V. Maz'ya, Rostock, Sept. 1998.
- Ecole Polytechnique de Tunisie, Oct. 1998.
- University of Texas, Austin, Oct. 98.
- University of Florida, Gainesville, Nov. 98.
- Université d'Orleans, Nov. 98.
- Université de Lyon 1, Feb. 99.
- Universidad de Concepcion, Chile, March 99.
- Universidad de Chile, Santiago, March 99.
- ICIAM, Edimbourg, July 1999.
- Ecole Polytechnique de Tunisie, Oct. 1999.
- University of Florida, Gainesville, Nov. 99.
- ETH Zürich, Dec. 99.
- MSRI, Berkeley, March 2000.
- Université J. Fourier, Grenoble, Oct. 2000.
- E.P.F. Lausanne, Oct. 2000.
- Danish Technical University, Nov. 2000.
- Ecole normale supérieure, Dec. 2000.
- Université de Saint-Etienne, Nov. 2001.
- 6ème Congrès Franco-Chilien de Math. Appliquées, Santiago, Dec. 2001.
- Université Paris 6, Jan. 2002.
- Picof 02, Carthage, Tunisie, April 2002.
- AMS-IMS-SIAM Summer Research Conference on "Waves in Periodic and Random Media", Mount Holyhoke, July 2002.
- Rencontres Optimisation de Formes, CIRM Luminy, July 2003.
- Computational methods in multiscale analysis and applications, U. of Florida, Gainesville, Feb. 2004.
- Université Rennes 1, April 2004.
- Ecole Polytechnique, Jan. 2005.
- Université de St. Etienne, Feb. 2005.
- XIth International Congress on Fracture, Turin, March 2005.
- Inverse Problems-Multiscale Analysis and Homogenization, Seoul, June 2005.
- 8th U.S. National Congress on Computational Mechanics, (symposium Mathematics of Homogenization) July 24–28th, 2005.
- Optimisation de Formes et applications, Nancy, Oct. 2005.
- Oberwolfach workshop 'Reactive Flow and Transport Through Complex Systems', Nov. 2005.

- Spring Southeastern Meeting of the AMS, Miami, April 2006.
- Journees EDP de Metz, Aspects géométriques des EDP et Applications, April 2006.
- Special session on Shapes and Free Boundaries, AIMS' 6th International Conference on Dynamical Systems, Differential Equations and Applications, Poitiers, 25–28 June 2006.
- International workshop 'Challenges and Opportunities in Nano-Optics', Shanghai, China, 5-9 Jan. 2007.
- Université du Chili, Santiago, Jan. 2007.
- Cinquièmes Journées Singulières, CIRM, Luminy, April 2007.
- Université de Clermont Ferrand, March 2007.
- Journées CPER Nancy-Metz, Nancy, Dec. 2007
- International Conference on Partial Differential Equations and Applications, Beijing Normal University, May 2007.
- ICIAM 2007, mini–symposium "Microstructures and PDE", Zurich, 16–20 July 2007.
- Université du Chili, Santiago, Jan. 2008.
- 4th International Conference on Inverse Problems, Control and Shape Optimization, PICOF'08. Marrakech, Maroc, April 2008.
- Conference on Imaging Microstructures: Mathematical and Computational Challenges. IHP, Paris, France, June 2008.
- University of Florence, Nov. 2008.
- Inverse Problems: Inverse problems; recent progress and new challenges. Banff, Nov. 2008.
- Colloque Modélisation mathématique en mécanique, Congrès Français de Mécanique, Marseille, Aug. 2009.
- Asymptotic methods in mechanics and other applications, Rennes Ker-Lann, Aug. 2009.
- International Conference on Elliptic and Parabolic Equations, Berlin Weierstrass Institute, Nov. 2009.
- Workshop on Control and Inverse Problems, IISc Bangalore, Dec. 2009.
- WIPA 2010, Workshop on Inverse Problems and Applications, Valparaiso, Jan. 2010.
- Some Mathematical Problems of Material Science: effects of multiple scales and extreme aspect ratios, Banff, Feb. 2010.
- 2010 ISFMA Symposium on Maxwell's Equations : Theoretical and Numerical Issues with Applications, Shanghai, July 2010.
- MSRI Berkeley, Inverse problems and applications, Nov. 08-12, 2010.
- Conference on Mathematics of Medical Imaging, the Fields Institute, Toronto, June 2011.
- Multi-Scale and High-Contrast PDE: From Modelling, to Mathematical Analysis, to Inversion, Oxford, July 2011.
- 7th International Congress on Industrial and Applied Mathematics, ICIAM, Vancouver, July 2011.

- SIAM Conference on Analysis of Partial Differential Equations, San Diego, Nov. 2011.
- International Conference on Inverse Problems and Applications in Honor of Gunther Uhlmann's 60th Birthday, Hangzhou, Sept. 2012.
- Workshop Coupled Physics Inverse Problems, Jan. 3rd-5th 2013, Santiago.
- 7èmes journées scientifiques de l'Université de Toulon, April 9-10th 2013.
- Applied Inverse Problems 2013, Daejeon, South Korea, July 1st-5th.
- Workshop on Multiple Modelling and Methods, , St. Etienne, Oct. 8-9th 2013.
- Forum Math-for-Industry 2013, Nov. 4-8th 2013, Fukuoka.
- French-Mexican Meeting on Industrial and Applied Mathematics, Nov. 25-29th 2013, Villahermosa.
- Seminar, University of Orsay, Dec. 12th 2013.
- Workshop on Nonlinear Evolution Equations: Analysis and Numerics, March 16th-22nd 2014, Oberwolfach.
- Picof 2014, May 6-9th 2014.
- Inverse problems conference, May 19th-23rd 2014, CIRM Luminy.
- Some Mathematical Problems related to Electromagnetic Waves, July 28th-Aug. 7th 2014, VIASM, Hanoi.
- Workshop Shape Optimization, Oct. 13-17th 2014, RICAM Linz.
- Workshop GOMS, Nov. 27-28th 2014, Marseille.
- Workshop Control Systems and Identification Problems, Jan. 12-16th 2015, Valparaiso.
- Spectral theory of Neumann Poincare operator and applications, Feb. 26-28th 2015, Inha, South Korea.
- Séminaire EPFL, March 27th 2015, Lausanne.
- Miniymposium Plasmonics and CALR, AIP 2015, May 25-29th 2015, Helsinki.
- Inverse Problems in the Physical Sciences IP-Phys2015, Aug. 3rd-5th 2015, Santiago.
- Minisymposium on Mathematics and Optics. ICIAM 2015, Beijing.
- Mathematics for Imaging, Oct. 21-24th 2015, ENS Paris.
- Minisymposium Metamaterials and Their Recent Applications, SIAM conf. on mathematical aspects of material science, May 8-12th 2016, Philadelphia
- Séminaire EPFL, Oct. 14th 2016, Lausanne.
- Analysis and Numerics of Acoustic and Electromagnetic Problems, Special Semester on Computational Methods in Science and Engineering, RICAM, Oct. 17th-22nd 2016, Linz.
- Workshop Metamath, Waves in periodic media and metamaterials, Nov. 23rd-25th 2016, Cargèse.
- IAS workshop on Inverse Problems, Imaging and PDE's, Dec. 5-9th 2016, Hong Kong.
- Math. Dept. Seminar, Hong Kong Baptist University, Dec. 20th. 2016, Hong Kong.

- Applied math seminar, Hong Kong University of Science and Technology, Dec. 23rd 2016, Hong Kong.
- Warren lecture, Dept. of Civil Engineering, U. of Minnesota, Jan. 20th 2017, Minneapolis.
- IMA seminar, U. of Minnesota, Jan. 21st 2017, Minneapolis.
- Workshop on Novel Optical Materials, March 13th-17th 2017, IMA, U. of Minnesota, Minneapolis.
- Seminar, U. of Houston, May 5th, 2017.
- Waves 2017, U. of Minnesota, May 15-19th, Minneapolis.
- Seminar ENSTA, June 30th 2017, Palaiseau.
- Seminar, Dept. of Physics, Dec. 16th 2017, UAEM Cuernavaca.
- International Workshop on The Neumann-Poincaré Operator, Plasmonics, and Field Concentrations, Feb. 8th-10th 2018, Jeju, South Korea.
- Workshop on Inverse Probems, Imaging and PDE's, Institute for Advanced Study HKUST, March 12-16th 2018, Hong Kong.
- Workshop on PDE's: Modelling & Theory, May 9-10th 2018, Monastir.
- Minisymposium on Modern Aspects of Bound States and Resonance, 2018 SIAM Annual Meeting, July 9-13th, Portland.
- Seminar, Université de Rennes, Oct. 4th 2018.
- Seminar, Université de Rouen, Nov. 22nd 2018.
- Conference on Mathematical and numerical approaches for multi-wave inverse problems, CIRM, April 1st-5th 2019, Marseille.
- Seminar, Inha University, April 25th 2019, Incheon, South Korea.
- Workshop Mathematics in Optical Imaging, April 29th-May 3rd 2019, IMA, U. of Minnesota, Minneapolis.
- Congress of Romanian Mathematicians, June 28th-July 3rd 2019, Galati, Romania.
- 2019 French Latin-American Conference on New Trends on Applied Mathematics, Nov. 4th-8th 2019, Santiago, Chile
- Seminar, LMA Marseille, Feb. 11th 2020.
- Seminar, Rutgers University, Feb. 21st 2020.
- Seminar, U. of Nice, March 12th 2020.
- Joint webinar on analysis and computation in material science (Beijing-Hong Kong-Wuhan), March 10th. 2021.
- Seminar, U. of Orsay, May 20th, 2021.
International Conference on Partial Differential Equations Related to Material Science, Beijing Normal University (online), May 7th-9th 2021.
- Minisymposium Mathematical Theories and Computational Algorithms for Novel Optical Materials, SIAM Annual meeting, Philadelphia (online), July 19th-23rd, 2021.
- Minisymposium Optimization, modeling and representation of shapes,

IFIP TC7 Conference, Quito (online), Aug. 20th-Sept 3rd 2021.

PHD STUDENTS AND POSTDOCS

- Faten Khayat, PhD 1997–2001, co–advisor T. Hadhri (Ecole Polytechnique de Tunisie). Faten is currently lecturer at the Faculté de Bizerte, Tunisia.
- Fehmi Ben Hassen, PhD 1999–2004, co–advisor A. Ben Abda (ENIT Tunis). Fehmi is currently assistant professor at the ENIT of Tunis.
- Morgan Brassel, PhD 2003–2008, currently agrégé de mathématiques at the Ecole Nationale Supérieure de Chimie of Lille.
- Elie Bretin, PhD 2005–2009, co–advisor V. Perrier (LJK Grenoble). Elie is currently Maitre de Conférence, INSA Lyon.
- Frédéric Huguet, PhD 2005, research engineer CEA Grenoble, co–advisor F. Devernay (INRIA).
- Lukas Jakabcin, PhD 2009-2013, co-advisor S. Labbe. Lukas is currently postdoc at the Université de Toulon.
- Abdelfatah Gtet, PhD 2013-2017, co-advisor F. Triki.
- Qi Xue, PhD 2014-2017, co-advisor F. Triki. Currently postoc ISTERRE Grenoble.
- Chun-Hsiang Tsou, PhD 2014-2017, co-advisor F. Triki. Currently postdoc HongKong Baptist University.
- Angèle Niclas, PhD starting in 2019, co-advisors Laurent Seppecher and Grégory Vial (Ecole Centrale de Lyon).
- Carlos Brito-Pacheco, PhD starting in 2021, co-advisor Charles Dapogny (LJK-UGA).
- Mathieu Charlot, PhD starting in 2021, co-advisor Rafael Estevez (SIMAP-UGA).

- Mouhcine Tilioua, postdoc CNRS (2004–2005).
- Sivaji Ganesh Sista, postdoc Région Rhône–Alpes, 2004–2005, currently assistant professor, Indian Institute of Technology, Mumbay.
- J.F. Babdjian, postdoc CNRS, 2007–2008, currently professor, Université d'Orsay.
- David Manceau, postdoc 2008–2009, currently maître de conférences, Université du Havre.
- H. Amrani Souhli, postdoc ANR 2009.
- M. Santacesaria, postdoc ANR 2013, currently assistant professor, University of Genoa.